# Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D. C. 20554

In the Matter of	)	
	)	WT Docket No. 01-309
Hand Held Products, Inc. Request for	)	
A Determination Regarding Application of	)	WT Docket No. 07-250
the Commission's Rules Governing	)	
Hearing-Aid Compatible Telephones	)	

### **SUPPLEMENT**

On April 28, 2006, Hand Held Products, Inc. ("HHP") requested a ruling that the hearing aid compatibility ("HAC") obligations in Part 20 do not apply to its mobile computing devices. Subsequently, on November 7, 2007, the Commission issued a notice of proposed rulemaking more broadly seeking comment on whether its HAC rules should apply to devices that "more closely resemble mobile computers" than traditional telephones.<sup>2</sup>

Honeywell International Inc. ("Honeywell"), which acquired HHP on December 20, 2007, is filing this Supplement to update the record and emphasize the need for prompt action on HHP's request, which has been pending for nearly two years. The Commission should clarify that its HAC rules do not apply to HHP's mobile computing devices for two reasons. First, because HHP's devices are sold strictly for business use and are not marketed to the general public, they cannot reasonably be equated to mass-market wireless phones, which the Commission subjected to HAC regulation in 2003. Second, the Commission's rules, on their face, do not apply to HHP's mobile computing devices because such devices are not sold to

<sup>&</sup>lt;sup>1</sup> On January 18, 2007, the Commission released a public notice (DA 07-103) seeking comment on HHP's request. Comments were filed on February 26, 2007 by the Hearing Loss Association of America, American Association of People with Disabilities, and Deafness Research Foundation. HHP filed reply comments on March 13, 2007.

<sup>&</sup>lt;sup>2</sup> Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets; Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones; Petition of American National Standards Institute Accredited Standards Committee C63 (EMC) ANSI ASC C63<sup>TM</sup>, *Second Report and Order and Notice of Proposed Rulemaking*, WT Docket Nos. 07-250 and 01-309, 22 FCC Rcd 19670, 19703-04 ¶ 92 (2007) ("NPRM").

wireless service providers, which is necessary to trigger a manufacturer's obligations under the Commission's rules. If the Commission nonetheless interprets its rules as being applicable to HHP's devices, the rules should be waived because the underlying purpose of the rules – to provide hearing impaired individuals with access to mass market wireless phones that work effectively with hearing aids – would not be served by regulating mobile computing devices used by commercial enterprises.

#### I. Products at issue.

The products at issue are the Dolphin 9500 and the Dolphin 7900. These are data collection devices used for inventory management, delivery tracking, transportation logistics and similar applications. FedEx Ground, for example, uses these devices for delivery tracking. A description of the Dolphin 9500 and Dolphin 7900 is included in Exhibit A.<sup>3</sup>

The Dolphin devices are sold directly to business customers. They are not marketed to consumers or available to consumers from wireless service providers or retail locations. The devices send and receive data using licensed and unlicensed frequencies. The devices support 802.11 and Bluetooth applications, and may be optionally equipped with a GSM radio capable of operating in the 850/1800/1900 MHz bands. HHP's customers, not HHP, decide whether to activate a GSM radio. Although the Dolphin devices are intended primarily for data applications, they are capable of voice communications if configured to permit such communications by the customer.<sup>4</sup>

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<sup>&</sup>lt;sup>3</sup> HHP intends to introduce a third Dolphin device in the Spring of 2008, which it believes will not trigger the Commission's HAC rules for the reasons set forth in this Supplement. Should the Commission disagree, Honeywell requests expedited action on HHP's pending request for waiver.

<sup>&</sup>lt;sup>4</sup> If an HHP customer wants to activate the data and/or voice capabilities of an optionally installed GSM radio, the customer must independently make arrangements to purchase and activate the necessary SIM cards.

# II. HHP's mobile computing devices are not subject to the Commission's HAC rules because such devices are sold strictly for business use and are not marketed to the general public.

The Commission should clarify that HHP's mobile computing devices are not subject to HAC regulation because they are sold strictly for business use and are not marketed to the general public. In 1988, when the Hearing Aid Compatibility Act ("HAC Act") was passed, wireless phones were exempted from regulation because they were considered "primarily business tools" that were "complements, as opposed to substitutes," for essential wireline phone service.<sup>5</sup> It was not until 2003, when the FCC determined that wireless phones and services had become "mass market consumer devices and services" that the HAC Act was extended to cover wireless phones.<sup>6</sup>

When the HAC rules were applied to wireless phones in 2003, the Commission never gave any indication that it intended to include within the scope of its rules *all* digital computing devices that could *possibly* be used for wireless voice communication. HHP's devices, while innovative and important for business, simply cannot be equated to mass market wireless telephone handsets, which have been found by the FCC to be "primary" phones delivering an "essential" service "critical" for "mainstream communications" in American society.<sup>7</sup>

<sup>&</sup>lt;sup>5</sup> Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, *Report and Order*, WT Docket No. 01-309, 18 FCC Rcd 16753, 16758 ¶ 9 (2003) ("2003 Order") ("Congress considered the exempted phones to be 'secondary,' meaning that such phones were viewed at the time to be complements, as opposed to substitutes, for the 'essential phones' it identified. At the time of the HAC Act's adoption, wireless phones were primarily business tools."). *See also Id.* at 16765 ¶ 27.

<sup>&</sup>lt;sup>6</sup> 2003 Order at 16756-57 ¶ 7. See also Id. at 16768-69 ¶ 36 (Wireless service has evolved "from what was once considered a complementary business service to a mass market consumer offering that delivers an essential service, telecommunications, through a platform that offers users the benefits of mobility and greater independence.").

<sup>&</sup>lt;sup>7</sup> *Id.* at 16756-57 ¶ 7 ("[M]ore consumers are beginning to view their wireless phones as their *primary* phone. . . [T]he need for individuals with hearing disabilities to have access to wireless services has become *critical*.") *and* 16761 at ¶ 17 ("[H]earing aid users will find themselves *marginalized from mainstream communications*, resulting in a regression to more dependent, less productive lives."). [Emphasis added]

Under the HAC Act, certain criteria had to be met before the FCC could revoke the wireless phone exemption.<sup>8</sup> Although the Commission found that these criteria were satisfied with respect to mass market wireless telephone handsets sold to consumers, it did not even consider whether the criteria were satisfied with respect to digital computing devices such as those manufactured by HHP. Indeed, the Commission is only *now* asking whether its HAC rules should extend to devices that "more closely resemble mobile computers" than traditional telephones.<sup>9</sup> Moreover, the Commission's focus continues to be on ensuring that hearing-impaired "consumers" have access to wireless services comparable to the "general population." Since HHP does not sell to, or even have a channel for selling to, consumers or the general population, its Dolphin devices should not be subject to HAC regulation.

# III. The Commission's rules, on their face, do not apply to HHP's mobile computing devices because such devices are not offered to the general public through wireless service providers.

The Commissions' rules, *on their face*, do not apply to HHP's mobile computing devices. Section 20.19 applies to handsets used to deliver commercial mobile radio services to the public.<sup>11</sup> Manufacturers are subject to Section 20.19 only if they "offer" wireless handsets "to

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<sup>&</sup>lt;sup>8</sup> Pursuant to the HAC Act, four criteria had to be satisfied to lift the HAC exemption for wireless phones: (1) the revocation had to be in the public interest; (2) continuation of the exemption had to have an adverse effect on hearing-impaired individuals; (3) compliance with the HAC Act had to be technologically feasible; and (4) compliance with the HAC Act could not increase costs to such an extent that digital wireless phones could not be successfully marketed. 47 U.S.C. § 610(b)(1) (1994).

<sup>&</sup>lt;sup>9</sup> See NPRM at 19703-04 ¶ 92 ("[W]hat constitutes a telephone in the context of new devices that more closely resemble mobile computers but have voice communications capabilities?").

<sup>10</sup> Id. ("Should we broaden or otherwise modify the scope of 20.19 in order both to maintain technological neutrality and to insure that hard of hearing *consumers* continue to have access to a selection of wireless services and features comparable to the *general population*."). [Emphasis added]

<sup>&</sup>lt;sup>11</sup> The Commission's rules define a "commercial mobile radio service" as a service "[a]vailable *to the public*, or to such classes of eligible users as to be effectively available to *a substantial portion of the public*." [Emphasis added]. *See* 47 C.F.R. § 20.3 (2007). This is consistent with the discussion in Section II above that the Commission's focus is on ensuring that hearing-impaired consumers have access to mass market wireless services comparable to the general population.

service providers."<sup>12</sup> HHP's devices are neither offered to, nor marketed through, wireless service providers. Rather, they are sold directly to business enterprises. Accordingly, HHP's devices do not fit into the regulatory paradigm of Section 20.19, which regulates manufacturers of wireless phones that are wholesaled to wireless service providers, which in turn, sell them to the general public.

As to the future, the Commission will need to determine whether mobile computing devices with voice capabilities are sufficiently ubiquitous at the consumer level to warrant an extension of the HAC rules.<sup>13</sup> The Commission will need to define what constitutes a mobile computing device and what classes of such devices may warrant regulation. Various combinations of technologies will have to be considered and sufficient lead time will be necessary for manufacturers to bring such devices into compliance. But, whatever the Commission's decision may be with respect to laptops, PDAs, and PCs available on a mass market basis, there is no reasonable basis to extend HAC regulation in the foreseeable future to mobile computing devices such as Hand Held's, which are marketed only to business enterprises and which are only incidentally capable of voice communication.

# IV. If the Commission determines that HHP's mobile computing devices are subject to its HAC rules, the rules should be waived.

If the Commission determines that HHP's mobile computing devices are subject to its HAC rules, the rules should be waived. The Commission may grant a request for waiver if the underlying purpose of a rule would not be served or would be frustrated and grant of the requested waiver would be in the public interest.<sup>14</sup> The underlying purpose of the HAC rules is

<sup>&</sup>lt;sup>12</sup> 47 C.F.R. §§ 20.19(c)(1) and (d)(1) (2007).

<sup>&</sup>lt;sup>13</sup> See NPRM at 19703-04 ¶ 92.

<sup>&</sup>lt;sup>14</sup> See 47 C.F.R. § 1.925(b)(3) (2007).

to ensure that hearing-impaired individuals are not marginalized from mainstream communications by providing them with access to mass market wireless phones that work effectively with hearing aids.<sup>15</sup> That purpose would not be advanced by regulating mobile computing devices that are used by commercial enterprises for inventory management, delivery tracking, transportation logistics and similar applications.<sup>16</sup>

### V. Conclusion

HHP's devices are business tools targeted to business users. Although HHP's devices may optionally be equipped to enable wireless voice communications, such capability is complementary to, not a substitute for, mass marketed wireless phone service used by the general public. HHP's mobile computing devices should be exempted from the reach of HAC regulation today, just as wireless phones were exempted when the HAC Act was passed in 1988. Accordingly, Honeywell respectfully requests that the Commission clarify that its HAC rules do not apply to the Dolphin 9500 and the Dolphin 7900 or, in the alternative, waive the application of the HAC rules.

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<sup>&</sup>lt;sup>15</sup> See 2003 Order at 16761 ¶ 17 ("[H]earing aid users will find themselves marginalized from mainstream communications, resulting in a regression to more dependent, less productive lives.") and 16768-69 at ¶ 36 (Wireless service has evolved into "a mass market consumer offering that delivers an essential service, telecommunications, through a platform that offers users the benefits of mobility and greater independence."). [Emphasis added]

<sup>&</sup>lt;sup>16</sup> HHP submitted additional arguments in support of a waiver with reply comments filed on March 13, 2007, which are incorporated herein by reference. To the extent there are concerns involving the needs of hearing impaired individuals in the workplace, such concerns are appropriately addressed by he Americans with Disabilities Act. The Americans with Disabilities Act was passed to prevent discrimination against individuals with disabilities in the workplace. The Commission's HAC rules, on the other hand, were implemented to ensure that hearing impaired persons have access to HAC compliant handsets from wireless service providers.

### Respectfully submitted,

### HONEYWELL INTERNATIONAL, INC.

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# **EXHIBIT A**

1 of 2



## **Dolphin® 9500 Series Mobile Computers**

### with Microsoft® Windows Mobile™ 2003 Second Edition Software





#### Features

Microsoft Windows Mobile 2003 Second Edition Software - Offers a user-friendly, industry standard platform for both developers and users.

Rugged, IP64 Sealed Construction - Operates in harsh environments, withstands rough treatment, and protects stored data.

Intel® X-Scale $^{\text{\tiny TM}}$  Processor - Provides faster processing of data collection applications, and image processing.

Ergonomic Designs - Facilitates comfortable, single-handed data collection for extended periods of use.

Adaptus Imaging Technology 5.0 - Provides instant pointand-shoot bar code scanning (1D and 2D), signature and digital image capture.

Triple Wireless Radio Design (9500) - Integrated WAN, LAN, and PAN for real-time data collection and access to information anytime, anywhere.

Lithium Ion Battery - 7.4 volt, 14.8 watt-hour ensures longer operation time with wireless communications and scanintensive applications.

1/4 VGA Color Display With Industrial Touch Screen - Offers enhanced data viewing and application interface.

Secure Digital (SD) User - Accessible Memory Interface - Provides the option of installing additional memory for application data storage.

Three Intuitive Keyboard Layouts - Customize your data entry for your mobile application solution.

Dolphin 9500 Series mobile computers deliver unparalleled performance and value for all mobile data collection applications. Their lightweight, ergonomic, and rugged designs provide the ease of use and operational reliability needed to excel in robust mobile applications such as package delivery, field service, route accounting, transportation, warehousing, retail, and industrial/manufacturing.

For maximum speed, efficiency, and usability, the Dolphin 9500 Series comes equipped with the Intel X-Scale processor and Windows Mobile software. The high-performance system architecture is powered by high-capacity, hot-swappable lithiumion battery packs, enabling Dolphin 9500 Series terminals to operate longer in wireless, scanintensive environments.

Designed to provide seamless data and voice connectivity for you and your mobile workers, the Dolphin 9500 terminal features an integrated tripleradio design for wireless WAN, LAN, and PAN communications. This state-of-the-art feature provides real-time information access anytime, anywhere, while communicating to any compatible wireless device, improving operational efficiency while ensuring data accuracy and security.

Integrated Adaptus Imaging Technology 5.0 provides workers with the data capture tools they need to get the job done quickly and efficiently, whether it is scanning a package for delivery, performing an inventory cycle count, capturing a signature for proof of receipt, or taking a picture of damaged goods. The Dolphin 9500 Series performs these tasks and more, extending the capabilities of your mobile applications and workforce.

To learn how Dolphin 9500 Series mobile computers can work for you, contact us at any of the locations listed on the back or visit us at www.handheld.com.

## Dolphin 9500 Series Specifications





System Architecture

Processor: Intel X-Scale PXA255 400MHz

**Development Environment:** Dolphin SDK Add-on for Pocket PC 2003 - supports Embedded Visual C++ 4.0

Dolphin .NET SDK for Pocket PC 2002 and 2003 - supports Visual Studio.NET 2003 (VB.NET and C#.NET)

Dolphin GSM/GPRS SDK Add-on for Pocket PC 2003 - supports Embedded Visual C++ 4.0 and Visual Studio.NET 2003

Operating Platform: Microsoft Windows Mobile 2003 Second Edition Software for Pocket PCs - Professional Edition

Third-Party Software: Support for Connect Terminal Emulation software (TNVT, 3270, 5250), Java Virtual Machine (JVM) Runtime

64MB RAM x 32MB non-volatile Flash Memory:

Data Inputs

Imager: 5100 Standard Range (SR) with green aimer, decodes from 1.9 in. to 13.1 in. (4.8 cm. to 33.3 cm.)

5300 Standard Range (SR) with High-Vis laser aimer, decodes from 1.9 in, to 13.1 in, (4.8 cm, to 33.3 cm.)

5100 Smart Focus (SF) with green aimer, decodes from 1.7 in. to 8.8 in. (4.3 cm. to 22.3 cm.)

(Specifications are for 100% UPC Code.)

Laser Scanner (9501/9551): HP non-decoded reads 5 mil bar codes from 2.75 to 7 in (.07 to .17 m) and 55 mil reflective bar codes from 5 to 50 in (.13 to 1.27 m.)

> LR non-decoded reads 10 mil bar codes from 10 to 24 in (.25 to .6 m) and 100 mil reflective bar codes from 66 to 232 in (1.67 to 5.9 m.) ALR non-decoded reads 13 mil bar codes from 18 to 39 in (.45 to 1 m) and 100 mil reflective bar codes from 102 to 363 in (2.6 to 9.2 m.) Codabar, Code 3 of 9, Code 11, Code 32 Pharmaceutical (PARAF), Code 93, Code 128, EAN with Add-On and EAN with Extended

> Coupon Code, EAN-13, Interleaved 2 or 5, Matrix 2 of 5, Plessey, PosiCode, RSS, Straight 2 of 5 IATA, Straight 2 of 5 Industrial,

Telepen, Trioptic Code, UCC/EAN-128, UPC and UPC-A (Dolphin 9551 scans only 1D symbologies.)

Aztec, Code 16K, Composite, Data Matrix, MaxiCode, OCR, PDF417, QR Code, RSS 2D Symbologies Read:

Composite and OCR Codes: Aztec Mesa, Codablock F, EAN-UCC, RSS-14 and OCR-A and OCR-B

**Postal Codes:** Postnet, Australian, British, Canadian, China, Japanese, KIX (Netherlands), and Korea Post, Planet Code

Three backlit keyboard options: 35-key numeric-shifted alpha, 43-key alpha-shifted numeric, and 56-key full alpha/numeric Keyboard:

Data Outputs

Display: 1/4 VGA (240 x 320 portrait mode) color TFT LCD display with industrial-grade touch screen

I/O Ports: Mechanical connector supports communication - USB 1.1 and serial RS-232 up to 115Kbps - and charges via cradles

AC adapter cables, Integrated IrDA port, Integrated audio jack that acts as a speaker and a microphone

Mass Storage: User-accessible Secure Digital memory interface

Wireless Radio Options

1D Symbologies Read:

IEEE 802.11b DSSS Authentication Methodologies: LEAP, MD5, TLS, TTLS, PEAP, and WEP WLAN:

WWAN (9500 only): GSM/GPRS Tri-band (900, 1800, 1900 MHz) radio with accessible SIM card interface

WPAN: Bluetooth (Class 2)

Physical

Dimensions: 9500/9501- 9.6"L x 3.45"W x 1.66"D at display (24.53 x 8.76 x 4.23 cm), 2.7"W x 1.5"D at grip (6.9 x 3.8 cm)

9550/9551- 9.6"L x 3.45"W x 2.27"D at display (24.53 x 8.76 x 5.76 cm), 2.7"W x 1.5"D at grip (6.9 x 3.8 cm)

Weight: 9500 Terminal - Batch: 19.7 oz. (558 gm), WLAN: 20.2 oz. (573 gm), WPAN: 20 oz. (567 gm), WLAN/WPAN: 20.3 oz. (576 gm)

9501 Terminal - 22.65 oz. (642 gm), all versions

9550 Terminal - Batch: 23.4 oz. (663 gm), WLAN: 23.9 oz. (677.5 gm)

9551 Terminal - 25.8 oz. (732 gm), all versions

Operating Temperature: 14 to 122°F (-10°C to 50°C); can operate down to -20°C with potential degradation in performance depending on the application

Storage Temperature: -4° to 158°F (-20° to 70°C) **Humidity:** 95% humidity, non-condensing **Electrical Static Discharge:** 15 KVA on all surfaces

Withstands multiple 5ft. (1.5m) drops onto concrete Impact Resistance:

**Environmental Resistance:** Independently certified to meet IP64 standards for moisture and particle resistance

Lithium-Ion battery technology; 7.4V, 14.8 watt-hour main battery with hot-swappable design for fast replacement in the field Power:

Other: Integrated stylus with optional tether and removable hand strap

Peripherals/Accessories

Dolphin HomeBase™ Charging/communications cradle with Auxiliary Battery Well. Data transfer via RS-232 serial or USB ports. **Dolphin Mobile Base** Mobile charging/communication cradle. Data transfer via RS-232 serial. Power out at 5 volts for peripheral devices. Dolphin QuadCharger™ Four-slot battery charger that charges four batteries in under four hours. One slot doubles as a battery analyzer. **Dolphin Mobile Charger** Charges a Dolphin terminal by plugging into a vehicle cigarette lighter/power port .

7.4V. 14.8 Watt Hour Lithium Ion rechargeable main battery for the Dolphin.

Dolphin ChargeBase Four-slot charging cradle-each slot holds, powers, and charges a terminal. **Dolphin Net Base** Four-slot charging/communication cradle designed for Ethernet-based communications. Charging/Comm Cables USB or serial cables that charge and communicate with the terminal directly, without a cradle.

Li-Ion Battery Pack Regulatory Approvals

FCC-CE-Radio Country: US/Canada, R&TTE 5300 Only:





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web நாக Address www.handheid.com Hand Held Products, Inc., ("Hand Held Products") <sup>©</sup> 1999-2006. All rights reserved. Printed in the U.S.A. Due to Hand Held Products' continuing product improvement programs, specifications and features herein are subject to change without notice.

# **EXHIBIT A**

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Adaptus



### **Dolphin® 7900 Series Mobile Computers**



### **Features**

Microsoft® Windows Mobile™ 2003 Second Edition Software – User-friendly, industry-standard platform for both developers and users.

Rugged, IP64 Sealed Construction – Operates in harsh environments, withstands rough treatment, and ensures years of reliable service.

Intel® X-Scale™ 400 MHz Processor – Faster processing of data collection applications and image processing.

Ergonomic Design – Compact, lightweight design facilitates comfortable, single-handed data collection.

Adaptus Imaging Technology 5.0 – Instant point-and-shoot bar code scanning (1D and 2D), signature and digital image capture.

Wireless Full Area Networking<sup>™</sup> – Integrated WAN, LAN, and PAN for real-time data exchange and voice communications to maximize productivity.

High Capacity Lithium Ion Battery with Advanced Power Management System – Longer operation time with wireless communications and scan-intensive applications.

3.8" Backlit Color Display with Industrial Touch Screen – Enhanced data viewing and impact resistance.

Mini Secure Digital (Mini-SD) User-Accessible Memory Interface – Provides the option of installing additional memory for secure application data storage.

25- and 36-Key Keyboard Options – Numeric or full alpha keypad solutions to satisfy your data entry requirements.

The Dolphin 7900 Series mobile computer delivers unparalleled performance and value for mobile data collection applications. Its compact, ergonomic, rugged design provides the ease of use and operational reliability needed to excel in robust mobile applications such as package delivery, field service, route accounting, transportation, warehousing, retail, and industrial/manufacturing.

For maximum speed, efficiency, and usability, the Dolphin 7900 comes equipped with the Intel PXA255 400MHz X-Scale processor and Windows Mobile Second Edition Software. The high performance system architecture is powered by a large capacity, hot-swappable lithium-ion battery pack, enabling the Dolphin 7900 to operate longer in wireless, scan-intensive environments.

To provide seamless data and voice connection between you and your mobile workers, the Dolphin 7900 features an integrated triple-radio design for Wireless Full Area Networking (WFAN). This state-of-the-art feature means the Dolphin terminal can be in constant contact with any compatible wireless device, providing real-time information access anytime, anywhere. This improves operational efficiency and ensures data accuracy and security.

Integrated Adaptus Imaging Technology 5.0 provides workers with the advanced data capture tools they need to get the job done quickly and efficiently. Whether scanning a package for delivery, performing an inventory cycle count, capturing a signature for proof of receipt, or taking a picture of damaged goods, the Dolphin 7900 extends the capabilities of your mobile applications and workforce while future proofing your investment.

To learn more about how Dolphin 7900 Series mobile computers can work for you, contact us at any of the locations listed on the back or visit us at www.handheld.com.

## Dolphin 7900 Series Specifications





System Architecture

Processor: Intel X-Scale PXA255 400MHz

Development Environment: Dolphin SDK Add-on for Pocket PC 2003 - supports Embedded Visual C++ 4.0

Dolphin .NET SDK for Windows Mobile 2003 - supports Visual Studio.NET 2003 (VB.NET and C#.NET)

Dolphin GSM/GPRS SDK Add-on for Pocket PC 2003 - supports Embedded Visual C++ 4.0 and Visual Studio.NET 2003

Operating Platform: Windows Mobile 2003 Second Edition Software for Pocket PCs

Third-Party Software: Support for PowerNet™ Terminal Emulation software (TNVT, 3270, 5250), Java Virtual Machine (JVM) runtime, ITScriptNet®, and App

Forge

Memory: 64MB RAM x 64MB non-volatile synchronous Flash standard; optional 128MB RAM high memory Memory Expansion: User-accessible Mini Secure Digital (Mini-SD) memory interface; optional 256MB RAM factory-installed

Data Inputs

Imager/Scanner: 5300 Standard Range (SR) with High-Vis laser aimer, decodes from 1.9 in. to 13.1 in. (4.8 cm. to 33.3 cm.)

(Specifications are for 100% UPC Code.)

1D Symbologies Read: Codabar, Code 3 of 9, Code 11, Code 32 Pharmaceutical (PARAF), Code 93, Code 128, EAN with Add-On and EAN with Extended

Coupon Code, EAN-13, Interleaved 2 or 5, Matrix 2 of 5, Plessey, PosiCode, RSS, Straight 2 of 5 IATA, Straight 2 of 5 Industrial,

Telepen, Trioptic Code, UCC/EAN-128, UPC and UPC-A

2D Symbologies Read: Aztec, Code 16K, Composite, Data Matrix, MaxiCode, OCR, PDF417, QR Code, RSS

Composite and OCR Codes: Aztec Mesa, Codablock F, EAN-UCC, RSS-14 and OCR-A and OCR-B

**Postal Codes:** Postnet, Australian, British, Canadian, China, Japanese, KIX (Netherlands), and Korea Post, Planet Code

Keyboards: Two backlit keyboard options with in-mold graphics for indefinite wear resistance: 25-key numeric and 36-key alpha

**Data Outputs** 

Display: 3.8" 1/4 VGA (240 x 320 portrait mode) color TFT LCD display with industrial-grade touch screen

I/O Ports: Industrial-grade mechanical connector supports communications-USB 1.1, serial RS-232 up to 115Kbps-and charging via cradles or

AC adapter cables, IrDA Port-Integrated, Speaker-Integrated, Microphone-Integrated, Headset jack

Wireless Radio Options

WWAN: GSM/GPRS Tri-band - 850/1800/ 1900 MHz in US, Latin America, and Canada or 900/1800/1900 MHz in Europe, Asia, and Australia

WL AN IEEE 802.11b DSSS Authentication Methodologies: WEP, 802.1x, LEAP, TKIP, MD5, TLS, TTLS, PSK, and PEAP

WPAN: Bluetooth (Version 1.2, Class 2)

**Physical** 

7.3"L x 3. 5"W x 1.7"D max (185 x 89 x 43 mm), 3.2"W x 1.5"D at grip (81 x 38 mm) **Dimensions:** 

Weight: 17 oz. (482 gm) to 19.2 oz (544 gm), configuration dependent

Operating Temperature: 14 to 122°F (-10°C to 50°C); can operate down to -20°C with potential degradation in performance depending on the application

-4° to 158°F (-20° to 70°C) Storage Temperature: Humidity: 95% humidity, non-condensing Electrical Static Discharge: 15 KVA on all surfaces

Impact Resistance: Withstands multiple 5 ft. (1.5m) drops onto concrete

**Environmental Resistance:** Independently certified to meet IP64 standards for moisture and particle resistance

Power: Lithium-lon battery technology with a 7.4V, 14.8 watt-hour main battery with hot-swappable design for fast replacement in the field

Integrated stylus with optional tether and removable hand strap

Peripherals/Accessories

Dolphin HomeBase™ Charging/communications cradle with auxiliary battery well. Data transfer via RS-232 serial or USB ports.

Dolphin Mobile Base™ Mobile charging/communication cradle. Data transfer via RS-232 serial. Power out at 5 volts for peripheral devices. Dolphin QuadCharger™ Four-slot battery charger that charges four batteries in under four hours. One slot doubles as a battery analyzer.

**Dolphin Mobile Charger** Charges a Dolphin terminal by plugging into a vehicle cigarette lighter/power port. Dolphin NetBase Four-slot charging/communication cradle designed for Ethernet-based communications.

Dolphin ChargeBase Four-slot charging cradle-each slot holds, powers, and charges a terminal.

**Dolphin Cable Kits** USB or serial cables that charge and communicate with the terminal directly, without a cradle.

**Dolphin Mag Stripe Reader** Attachment that reads magnetic stripe information encoded on credit cards, driver's licenses, and personal information cards

Regulatory Approvals

FCC-CE-Radio Country: US/Canada, R&TTE

5300 Only:

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